



09/621513

CD

HESLIN ROTHENBERG FARLEY & MESITI P.C.

Robert E. Heslin
Jeff Rothenberg
Kevin P. Radigan
Susan E. Farley
Nicholas Mesiti
Philip E. Hansen*
Blanche E. Schiller
Wayne F. Reinke
David P. Miranda

*Patent Agent
†Technical Specialist

INTELLECTUAL PROPERTY LAW

PATENTS • TRADEMARKS • COPYRIGHTS

Attorneys at Law
5 Columbia Circle
Albany, New York 12203
Telephone: (518) 452-5600
Facsimile: (518) 452-5579
www.hrfmlaw.com

Kathy Smith Dias
David A. Pascarella
Victor A. Cardona
Lee Palmateer
John Pietrangelo*
Brett M. Hutton
Stephen M. Hladik
Edward Timmer
Alana M. Fuierer
John W. Boger
Surinder S. Punia†

Of Counsel
Martha L. Boden
Jill M. Breedlove

Joseph L. Spiegel
Poughkeepsie, NY

September 15, 2005

Commissioner for Patents
Decisions & Certificate of Correction
P.O. Box 1450
Alexandria, VA 22313-1450

Re: Correction of Mistake in Printed Patent
Under §1480 of the Manual of Patent
Examining Procedures
U.S. Patent No.: 6,930,715
Date of Patent: August 16, 2005
Inventor(s): Mower
Our File No.: 0794.022

Certificate
SEP 23 2005
of Correction

Dear Sir:

We are in receipt of your letter dated September 9, 2005, copy enclosed, whereby you stated that the errors we submitted were made in accordance with the record in the Patent and Trademark Office. Please see enclosed a copy of our Amendment dated June 30, 2004, filed with a Request for Continued Examination, and which clearly indicates the corrections in question.

Also enclosed herewith are copies of our original Certificate of Correction effecting a corrective amendment.

The patentee respectfully solicits the granting of the requested Certificate of Correction.

Respectfully submitted,

Wayne F. Reinke, Esq.
Registration No. 36,650
Attorney for Applicant

WFR/cma
Enclosure

NAUSERS\0794 SUNY-AIB\0794022\TO PTO\0794022-COCLTR2-PTO.DOC
September 15, 2005

SEP 26 2005



COPY



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY OF COMMERCE AND
COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

0794-022
WFR

DATE

September 9, 2005

Wayne F. Reinke, Esq
Heslin Rothenberg Farley & Mesiti P.C.
5 Columbia Circle
Albany, New York 12203

PATENT NO: 6,930,715

APPLICAN : Mower

SERIAL N/O: 09/621513

FILING DATE: 07/21/2000

REQUEST FOR CERTIFICATE OF CORRECTION

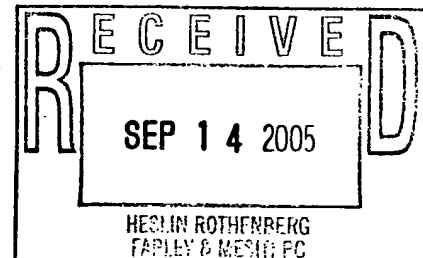
The request for the issuance of a certificate of correction in the above identified patent has been considered.

Inspection of the file of the application for the patent reveals, however, that in connection with the alleged error to which you refer, the patent is printed in accordance with the record in the Patent and Trademark Office of the application as passed to issue by the examiner. There being no fault on the part of the Patent and Trademark Office, it has no authority to a issue certificate of correction under the provisions of 35 U.S.C. 254 and Rule 322 of the Rules of Practice of the United States Patent and Trademark Office in Patent Cases.

Further correspondence concerning the matter should be filed and directed to Decisions & Certificate of Correction Branch. Any response(s) must be filed within a two-month period.

Angela Green
Cecelia B. Newman (703) 308-9390 ext 102
Angela Green (703) 308-*9380 Ext 102*
Decisions & Certificates of Corrections
Form PTOL-209 (REV. 5/93)

CBN/arg



SEP 26 2005

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: James E. Mower

Confirmation No.: 4849

Serial No.: 09/621,513

Group Art Unit: 2615

Filed: 07/21/2000

Examiner: Solomon, G.

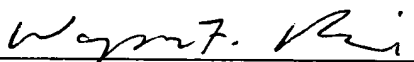
Title: METHOD, SYSTEM AND PROGRAM PRODUCT FOR AUGMENTING AN
IMAGE OF A SCENE WITH INFORMATION ABOUT THE SCENE

COPY



CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being transmitted by facsimile transmission to: Examiner Gary L. Solomon, Group Art Unit 2615, United States Patent and Trademark Office, Alexandria, VA 22313-1450, Facsimile No. 703-872-9306, on June 30, 2004.


Wayne F. Reinke
Attorney for Applicants
Registration No.: 36,650

Date of Signature: June 30, 2004.

To: Mail Stop RCE
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND RESPONSE TO FINAL OFFICE ACTION

Dear Sir:

In response to a final Office Action with a mailing date of April 30, 2004, response to which is due by July 30, 2004 without extension, and which is being filed with a Request for Continued Examination, kindly amend the application as follows.

Amendment to the Specification:

Amend the fourth full paragraph on page 2, lines 14-22, as follows:

The present invention provides, in a first aspect, a method of augmenting an image of a scene. The method comprises a first computing unit obtaining a digital image of a scene, acquiring a digital elevation model of the scene, and registering the digital image with the digital elevation model to create a registered digital image. The digital elevation model comprises data for creating a three-dimensional perspective model of the scene in two dimensions ~~is based on elevation data corresponding to information about the scene~~. The method further comprises the first computing unit providing the registered digital image to a second computing unit coupled to the first computing unit by a communications network, and augmenting the registered digital image with at least some of the information about the scene in response to input from the second computing unit.

Amendment to the Abstract:

Amend the first paragraph on page 27, lines 6-11, as follows:

A fixed or mobile image capturing device, coupled to a first computer, is remotely controlled over a global computer network by a second computer, and obtains a digital image of a scene. The first computer acquires a digital elevation model of the scene, which is data for creating a three-dimensional perspective model of the scene in two dimensions ~~based on elevation data corresponding to information about the scene~~, and registers the image with the digital elevation model. The registered digital image is provided to the second computer over the global computer network. When a user at the second computer points to an area of the registered image, the first computer augments the image provided with at least some ~~of the~~ information corresponding to the area pointed to.

Amendment to the Claims:

In compliance with the Revised Amendment Format, a complete listing of claims is provided herein.

1. (Currently Amended) A method of augmenting an image of a scene, comprising:

obtaining by a first computing unit a digital image of a scene;

acquiring by the first computing unit a digital elevation model of the scene, wherein the digital elevation model comprises data for creating a three-dimensional perspective model of the scene in two dimensions ~~is based on elevation data corresponding to information about the scene~~;

registering by the first computing unit the digital image with the digital elevation model to create a registered digital image;

providing the registered digital image from the first computing unit to a second computing unit coupled to the first computing unit by a communications network; and

augmenting the registered digital image provided to the second computing unit with at least some of the information about the scene in response to input from the second computing unit.
2. (Original) The method of claim 1, wherein obtaining the digital image comprises obtaining an image of the scene in real time with a fixed image capturing device.
3. (Original) The method of claim 1, wherein obtaining the digital image comprises obtaining an image of the scene in real time with a mobile image capturing device.
4. (Original) The method of claim 1, wherein obtaining the digital image comprises obtaining a preexisting image of the scene.
5. (Original) The method of claim 1, wherein the obtaining comprises obtaining an analog image and digitizing the analog image.

6. (Original) The method of claim 1, wherein the acquiring comprises acquiring a preexisting digital elevation model.

7. (Original) The method of claim 1, wherein the information comprises a location of at least one above-ground feature within the scene.

8. (Original) The method of claim 1, wherein the information comprises a location of at least one underground feature within the scene.

9. (Original) The method of claim 1, wherein the obtaining comprises obtaining an image of the scene from an image-capturing device, the method further comprising determining an orientation and a zoom factor for the image-capturing device.

10. (Original) The method of claim 9, wherein the image-capturing device is fixed, and wherein the determining comprises reading positional and zoom factor information from the image-capturing device.

11. (Original) The method of claim 10, wherein the positional information comprises latitude, longitude and elevation above ground.

12. (Original) The method of claim 9, wherein the image-capturing device is mobile, and wherein the determining comprises reading a zoom factor from the image-capturing device and obtaining the orientation from equipment positionally fixed relative to the image-capturing device.

13. (Original) The method of claim 12, wherein the equipment comprises a global positioning system, a digital compass and a digital inclinometer.

14. (Original) The method of claim 1, further comprising rendering the registered digital image at the second computing unit to produce a rendered image, wherein the augmenting comprises:

identifying at the second computing unit a point of interest in the rendered image;

providing the identified point of interest from the second computing unit to the first computing unit;

reverse projecting the identified point of interest at the first computing unit to determine coordinates therefor; and

accessing the information at the first computing unit corresponding to the coordinates.

15. (Original) The method of claim 14, wherein the augmenting further comprises overlaying the information corresponding to the coordinates on the registered digital image.

16. (Original) The method of claim 15, wherein the information comprises textual cartographic data.

17. (Original) The method of claim 15, wherein the information comprises graphical cartographic data.

18. (Original) The method of claim 1, further comprising rendering the registered digital image at the second computing unit to create a displayed image, wherein the input comprises pointing by a user to at least one area of the displayed image.

19. (Original) The method of claim 1, wherein the communications network comprises a global computer network.

20. (Currently Amended) A system for augmenting an image of a scene, comprising:
- a computing unit programmable for:
 - obtaining a digital image of a scene;
 - acquiring a digital elevation model of the scene, wherein the digital elevation model comprises data for creating a three-dimensional perspective model of the scene in two dimensions ~~is based on elevation data corresponding to information about the scene;~~
 - registering the digital image with the digital elevation model to create a registered digital image;
 - providing the registered digital image over a communications network; and
 - augmenting the registered digital image with at least some ~~of the~~ information about the scene in response to input.
21. (Original) The system of claim 20, further comprising a fixed image capturing device coupled to the computing unit for capturing an image of the scene in real time.
22. (Original) The system of claim 20, further comprising a mobile image capturing device coupled to the computing unit for capturing an image of the scene in real time.
23. (Original) The system of claim 20, further comprising a scanner for digitizing an analog image of the scene.
24. (Original) The system of claim 20, wherein the acquiring comprises acquiring a preexisting digital elevation model.
25. (Original) The system of claim 20, wherein the information comprises a location of at least one above-ground feature within the scene.
26. (Original) The system of claim 20, wherein the information comprises a location of at least one underground feature within the scene.

27. (Original) The system of claim 20, further comprising an image-capturing device, the computing unit determining an orientation and a zoom factor for the image-capturing device.

28. (Original) The system of claim 27, wherein the image-capturing device is fixed, and wherein the determining comprises reading positional and zoom factor information from the image-capturing device.

29. (Original) The system of claim 28, wherein the positional information comprises latitude, longitude and elevation above ground.

30. (Original) The system of claim 27, further comprising orientation equipment positionally fixed relative to the image-capturing device, wherein the image-capturing device is mobile, and wherein the determining comprises reading a zoom factor from the image-capturing device.

31. (Original) The system of claim 30, wherein the orientation equipment comprises a global positioning system, a digital compass and a digital inclinometer.

32. (Original) The system of claim 20, further comprising another computing unit coupled to the computing unit via the communications network, the another computing unit comprising: a display for rendering the registered digital image to produce a rendered image; and a pointing device for identifying a point of interest in the rendered image; wherein the augmenting comprises reverse projecting the identified point of interest to determine coordinates therefor, and accessing the information corresponding to the coordinates.

33. (Original) The system of claim 32, wherein the augmenting further comprises overlaying the information corresponding to the coordinates on the rendered image.

34. (Original) The system of claim 33, wherein the information comprises textual cartographic data.

35. (Original) The system of claim 33, wherein the information comprises graphical cartographic data.

36. (Original) The system of claim 32, wherein the communications network comprises a global computer network.

37. (Currently amended) At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of augmenting an image of a scene, the method comprising:

obtaining by a first computing unit a digital image of a scene;

acquiring by the first computing unit a digital elevation model of the scene, wherein the digital elevation model comprises data for creating a three-dimensional perspective model of the scene in two dimensions ~~is based on elevation data corresponding to information about the scene;~~

registering by the first computing unit the digital image with the digital elevation model to create a registered digital image;

providing the registered digital image from the first computing unit to a second computing unit coupled to the first computing unit by a communications network; and

augmenting the registered digital image provided to the second computing unit with at least some of the information about the scene in response to input from the second computing unit.

38. (Original) The at least one program storage device of claim 37, wherein obtaining the digital image comprises obtaining a digital image of the scene in real time from a fixed digital image capturing device.

39. (Original) The at least one program storage device of claim 37, wherein obtaining the digital image comprises obtaining a digital image of the scene in real time from a mobile digital image capturing device.

40. (Original) The at least one program storage device of claim 37, wherein obtaining the digital image comprises obtaining a preexisting digital image of the scene.

41. (Original) The at least one program storage device of claim 37, wherein acquiring the digital elevation model comprises acquiring a preexisting digital elevation model.

42. (Original) The at least one program storage device of claim 37, wherein the information comprises a location of at least one above-ground feature within the scene.

43. (Original) The at least one program storage device of claim 37, wherein the information comprises a location of at least one underground feature within the scene.

44. (Original) The at least one program storage device of claim 37, wherein the obtaining comprises obtaining the digital image from a digital image-capturing device, the method further comprising determining an orientation and a zoom factor for the digital image-capturing device.

45. (Original) The at least one program storage device of claim 44, wherein the digital image-capturing device is fixed, and wherein the determining comprises reading positional and zoom factor information from the digital image-capturing device.

46. (Currently Amended) The at least one program storage device of claim ~~[[37]]~~ 45, wherein the positional information comprises latitude, longitude and elevation above ground.

47. (Original) The at least one program storage device of claim 44, wherein the digital image-capturing device is mobile, and wherein the determining comprises reading a zoom factor from the digital image-capturing device and obtaining the orientation from equipment positionally fixed relative to the digital image-capturing device.

48. (Original) The at least one program storage device of claim 47, wherein the equipment comprises a global positioning system, a digital compass and a digital inclinometer.

49. (Original) The at least one program storage device of claim 37, further comprising rendering the registered digital image at the second computing unit to produce a rendered image, wherein the augmenting comprises:

identifying at the second computing unit a point of interest in the rendered image;

providing the identified point of interest from the second computing unit to the first computing unit;

reverse projecting the identified point of interest at the first computing unit to determine coordinates therefor; and

accessing the information at the first computing unit corresponding to the coordinates.

50. (Original) The at least one program storage device of claim 49, wherein the augmenting further comprises overlaying the information corresponding to the coordinates on the registered digital image.

51. (Original) The at least one program storage device of claim 50, wherein the information comprises textual cartographic data.

52. (Original) The at least one program storage device of claim 50, wherein the information comprises graphical cartographic data.

53. (Original) The at least one program storage device of claim 37, wherein the communications network comprises a global computer network.

54. (New) A system of augmenting an image of a scene, comprising:

means for obtaining by a first computing unit a digital image of a scene;

means for acquiring by the first computing unit a digital elevation model of the scene, wherein the digital elevation model comprises data for creating a three-dimensional perspective model of the scene in two dimensions;

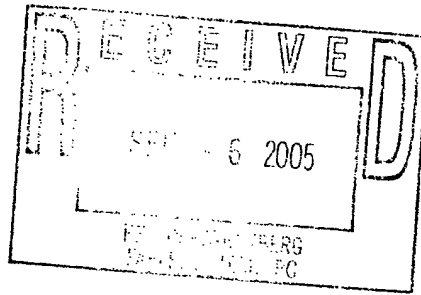
means for registering by the first computing unit the digital image with the digital elevation model to create a registered digital image;

means for providing the registered digital image from the first computing unit to a second computing unit coupled to the first computing unit by a communications network;
and

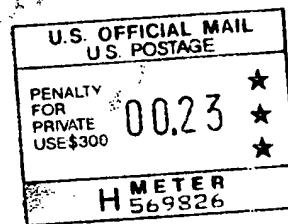
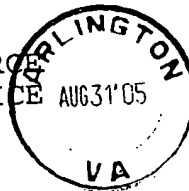
means for augmenting the registered digital image provided to the second computing unit with at least some information about the scene in response to input from the second computing unit.



COPY



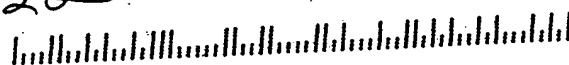
U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICE
WASHINGTON, D.C. 20231



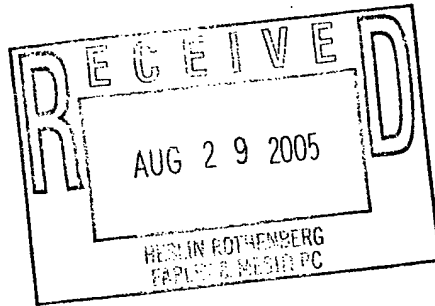
A request for a Certificate of Correction has
been received for U.S. Patent 6930715

WAYNE F. REINKE, ESQUIRE
HESLIN ROTHENBERG FARLEY & MESITI PC
5 COLUMBIA CIRCLE
ALBANY, N.Y. 12203

0794.022
CO23



0794.022



Applicant: Mower
Patent No.: 6,930,715
Patent Date: August 16, 2005
Title: METHOD, SYSTEM AND PROGRAM PRODUCT FOR AUGMENTING
AN IMAGE OF A SCENE WITH INFORMATION ABOUT THE
SCENE

Enclosed: Transmittal Letter
Certificate of Correction
Postcard

0794.022 WFR/cma



Mailed: 08/22/05
NO/DD



Applicant: Mower
Patent No.: 6,930,715
Patent Date: August 16, 2005
Title: METHOD, SYSTEM AND PROGRAM PRODUCT FOR AUGMENTING
AN IMAGE OF A SCENE WITH INFORMATION ABOUT THE
SCENE

Enclosed: Transmittal Letter
Certificate of Correction
Postcard

0794.022 WFR/cma

Mailed: 08/22/05
NO/DD

HESLIN ROTHENBERG FARLEY & MESITI P.C.

Robert E. Heslin
Jeff Rothenberg
Kevin P. Radigan
Susan E. Farley
Nicholas Mesiti
Philip E. Hansen*
Blanche E. Schiller
Wayne F. Reinke
David P. Miranda

*Patent Agent



INTELLECTUAL PROPERTY LAW
PATENTS • TRADEMARKS • COPYRIGHTS

Attorneys at Law
5 Columbia Circle
Albany, New York 12203
Telephone: (518) 452-5600
Facsimile: (518) 452-5579
www.hrfmlaw.com

August 22, 2005

Kathy Smith Dias
David A. Pascarella
Victor A. Cardona
Lee Palmateer
John Pietrangelo*
Brett M. Hutton
Stephen M. Hladik
Edward Timmer
Alana M. Fuierer
John W. Boger

Of Counsel
Martha L. Boden
Jill M. Breedlove

Joseph L. Spiegel
Poughkeepsie, NY

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Re: Correction of Mistake in Printed Patent
Under §1480 of the Manual of Patent
Examining Procedures
U.S. Patent No.: 6,930,715
Date of Patent: August 16, 2005
Inventor(s): Mower
Our File No.: 0794.022

Dear Sir:

Upon proofreading the sealed patent, we noticed errors made by the Patent Office.

Transmitted herewith is a proposed Certificate of Correction effecting a corrective amendment.

The patentee respectfully solicits the granting of the requested Certificate of Correction.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Wayne F. Reinke".

Wayne F. Reinke, Esq.
Registration No. 36,650
Attorney for Applicant

WFR/cma
Enclosure

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control

UNITED STATES PATENT AND TRADEMARK OFFICE CERTIFICATE OF CORRECTION

PATENT NO. : 6,930,715
APPLICATION NO. : 09/621,513
ISSUE DATE : August 16, 2005
INVENTOR(S) : Mower

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Title Page:

Abstract:

Line 7, delete the following wording: "based on data corresponding"

Specification:

Col. 1, line 64, insert the word —perspective— after the words "three-dimensional"

Claims:

Claim 20

Col. 12, line 10, delete the word "of" at the beginning of the line

Claim 37

Col. 13, line 14, delete the word "of" after the word "some"

MAILING ADDRESS OF SENDER (Please do not use customer number)

Wayne F. Reinke, Esq.
Heslin Rothenberg Farley & Mesiti P.C.
5 Columbia Circle
Albany, New York 12203 Tel: (518) 452-5600 Fax: (518) 452-5579

This collection of information is required by 37 CFR 1.322, 1.323, and 1.324. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 1.0 hour to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing the burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Attention Certificate of Corrections Branch, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

SEP 26 2005